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- b. the liquid passageway includes ozone and liquid mixing and a liquid flow configuration that ensures purifying contact of the liquid with ozone before the liquid reaches the dispensing outlet.

REMARKS

The Examiner is asked to reconsider the finality of the restriction requirement. If the apparatus as claimed is used to practice a continuous flow operation, then it is no longer the apparatus as claimed. The claims require the apparatus to practice a batch flow that is defined more precisely by amendments to the claims, and operating an apparatus continuously would come outside the claims.

Claim 58 contains all the limitations of apparatus parent claim 39, which is being examined. If claim 39 is found allowable, then claim 58 should be examined and presumably also allowed.

The withdrawn claims have not yet been canceled, because applicant intends to petition the restriction requirement if the Examiner adheres to it after reconsideration.

The Anticipation Rejection of Claims 1, 5, and 8-10 by Barnes

This rejection is based on mistakes of fact involving the teaching of Barnes and the content of the rejected claims. The many distinctions that these claims define over the Barnes teaching warrant withdrawal of this rejection.

Barnes does not operate a batch basis, but operates continuously to recirculate liquid to and from a container such as a hot tub or swimming pool (column 1, lines 10 and 11). Container 11 is not an upflow chamber arranged as claimed in a passageway extending from an untreated liquid batch container to a purified liquid dispenser. An initial flow of liquid does not rise within Barnes' chamber 11, which remains constantly filled during continuous recirculating operation. The bubbles rising in Barnes' chamber 11 also do not overtake rising

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liquid in an upflow chamber as claimed, since no such condition can occur with the Barnes continuous operation.

The Barnes teaching does not include any mixer in a liquid passageway, but only suggests an empty liquid passageway. Moreover, since Barnes lacks any upflow chamber as claimed, Barnes also fails to suggest a mixer downstream of an upflow chamber (claim 9). Nor does Barnes suggest any constriction in an air flow through a generator, enabling a pumping system to draw liquid from an untreated liquid batch container (claim 10). Finally, Barnes does not suggest that a generator be operated before liquid begins flowing in a passageway (claim 5). This subject matter is structural in terms of timing of interrelated activities of claimed components. Also, there is no statutory basis for disregarding claim language as functional.

Obviousness Rejection of Claims 11-13, 17-19, 39, 43-50, and 54-56 on Burris '993 in view of Barnes

Although Burris discloses a batch liquid purifier, Burris does not suggest an upflow chamber as defined in these claims. The Burris pumping system of FIG. 4 pumps an ozone-containing gas into a liquid chamber so that the bubbles introduced into the liquid pump the liquid through line 35 (column 5, lines 1-8). This does not suggest the upflow chamber of the claims, which require an initial flow of liquid and ozone entering the chamber together so that the liquid rises in the upflow chamber at a slower rate than the rising of bubbles entrained within the liquid. None of this is suggested by the Burris reference.

Barnes also does not suggest an upflow chamber, an initial flow of liquid rising in an upflow chamber, bubbles rising in an upflow chamber faster than the rising liquid, or even batch flow operation. The Barnes teaching is for continuous operation of a liquid flow that never has a leading edge that could rise in an upflow chamber, which Barnes does not suggest.

An air pump suggested in the Burris reference is not proposed for emptying a passageway of liquid after a purification cycle. An ordinary worker could get such a concept only from the present application, and not from the Burris reference.

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Although the Burris reference includes an ozone sensor, it does not suggest any sensing system arranged to control an air pump emptying a passageway of liquid after a purification cycle. The fact that air pumps and sensors exist in liquid batch treatment processes does not make it obvious to combine these for the claimed purposes, which are nowhere suggested in the cited references.

Neither Burris nor Barnes suggest a valve upstream of an ozone generator and opening the valve only when air flow enters the generator during purifier operation. The Burris reference suggestion of a desiccant does not suggest the claimed valve.

Barnes does not suggest batch operation and does not suggest any mixing other than whatever mixing occurs from passing liquid through a gas-entraining venturi. Barnes does not suggest any upflow chamber as previously explained and therefore cannot suggest liquid mixing regions both upstream and downstream of such an upflow chamber.

Claims drawn toward ozone generator operations, outlet closure, and other "functions" are structural claims defining timing and other relations among structures. For example: claim 43 defines a barrier to liquid entry and defines when the barrier is effective; claim 44 requires that the ozone generator be operated before liquid flows in the passageway, which involves a timing of the operation of structural elements; and claim 47 defines a pump controller, including the requirement of stopping the pump after liquid stops flowing to the pump. There is no statutory basis for ignoring any limitation in a claim by characterizing it as "functional", and the claims in question define structural elements and interrelationships that are not merely "functional" anyway.

Obviousness Rejection of Claims 2, 3, 40, and 41 on Burris, Barnes, and Hinkle

Although light-transmitting walls have been proposed for liquid containers, neither Hinkle nor any other cited art suggests an upflow chamber as claimed, bubbles visibly rising in an upflow chamber as claimed, or a light-transmitting wall making such bubbles visible. Nor has any reference suggested an illuminator arranged to enhance the visibility of bubbles rising in an upflow chamber as claimed. The fact

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that illuminators are known and light transparent walls are known would not lead an ordinary worker to combine these elements with an upflow chamber as claimed, when no cited art suggests any such upflow chamber or any such reason for a transparent wall and an illuminator.

Obviousness Rejection of Claims 4 and 42 over Burris, Barnes, Hinkle, and Domnick

The Domnick color indicator for a fluid filter has no relationship to an upflow chamber in which bubbles rise and has no relation to the reason for coloring a light-transmitting wall of such a bubble chamber so that bubbles can be viewed without also seeing any mineral deposits left by the liquid being purified. It is only from applicant's teaching that such a combination can be imagined.

Obviousness Rejection of Claims 6 and 7 over Barnes and Uban

The Barnes filter is arranged in a flow line separate from the line receiving ozone-containing gas. Barnes also does not dispense any liquid and does not operate on a batch basis so that the Barnes filter is not upstream of a dispenser. The fact that filters exist for liquid flow can be conceded, but Barnes does not suggest the basic elements of the claimed combinations or any arrangement of a filter in a flowthrough batch process as claimed. The Uban filter indicator operates in response to pressure drop through the filter and not in response to the extent of operation of the purifier as claimed. Even if it were possible to combine Uban with Barnes, the resulting filter would be in a different location than claimed, its indicator would respond to a different circumstance than claimed, and there would be no upflow chamber as claimed in which an initial flow of liquid rises more slowly than bubbles entrained within the liquid.

Obviousness Rejection of Claims 14-16, 20, 51-53, and 57 on Burris, Barnes, and Norris

Besides the primary references failing to suggest the subject matter of the parent claims, the Norris reference does not suggest a spout that activates a purifier when it is extended and deactivates a purifier when it retracts or a switch that blocks dispensing unless the


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spout is extended. Nor does Norris suggest a container that detaches from the dispenser.

Conclusion

Since every cited combination of references falls short of anticipating or suggesting the subject matter of the claims, as explained above, all these rejections can be withdrawn. For any question on this, the Examiner is invited to call applicant's attorney.

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Dated: AUG 19 1999

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